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ABSTRACT

Many effective classroom teachers profess reluctance to use miscue analysis, either because they experience interference by their previous use of informal reading inventory procedures or because they find the procedures for miscue analysis too involved for use in the classroom. Such teachers need a brief explanation of the psycholinguistic function of reading and a manageable classroom procedure. "Adapted Miscue Analysis" fulfills this need by combining the notational practices and some of the scoring elements of the informal reading inventory with an analytical emphasis on meaning, analysis of the reader's psycholinguistic strategies, and assessment of comprehension within the reader's own cognitive framework. In this way, adapted miscue analysis allows teachers to use as much of the procedures as they require or feel to be appropriate, combining informal observations with systematically collected data. (RL)

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Adapted Miscue Analysis

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Many effective classroom teachers have for a long time incorporated the use of the Informal Reading Inventory into their programs. As a result, they have been able to analyze children's reading habits in a systematic fashion and decide on an appropriate level of difficulty for children's reading materials. These same teachers are now learning that a new method, Miscue Analysis, is preferable. The theory for Miscue Analysis was generated by Kenneth Goodman (1967) as an outgrowth of psycholinguistic thinking. The method for Miscue Analysis was developed by Yetta Goodman and Carolyn Burke (1972) to incorporate the theory into procedures suited to clinic and research use. While the procedures have demonstrated their validity in both clinic (Feeley, 1977) and research (Allen, 1976), they have yet to receive wide acceptance by classroom teachers.

Informal discussions with teachers who have studied the method reveal that they are reluctant to use it because: 1) they experience interference from their habitual use of IRI (Informal Reading Inventory) procedures, 2) they find the procedures too involved for use in the average classroom where schedules are already overcrowded with requirements. It is therefore apparent that many valuable insights into children's reading behaviors can be overlooked for procedural reasons, and that an adaptation of Miscue Analysis could promote its use.

This paper will review the WHY of Miscue Analysis for the benefit of those not already acquainted with psycholinguistic theory. It will then proceed to explain some proposed modifications, the HOW of Adapted Miscue Analysis.

The WHY of Miscue Analysis--Psycholinguistic Principles

A bird's-eye view of some psycholinguistic processes at work can be examined in the following excerpt found in a local paper: "Wanted: Used ladies, three speed bicycle." The person reading this item is, in all probability, a competent user of the language. If s/he is using language processing skills to get at the author's intended meaning, s/he may be encountering some cognitive dissonance. The grammatical arrangement, Adj/FemN, Adj/Adj/N, signals momentary uncertainty. Since when does the local weekly advertise for "used ladies"? The brief uncertainty this improbability triggers is set aright when the reader decides that it is a misprint and calls for some linguistic and cognitive readjustment. The reader who draws such conclusions quickly, with a minimum of perceptual input, is probably an efficient reader. The reader of our local paper was probably the same kind of reader when s/he relied on syntax, semantics, as well as letter-sound relationships and linguistic redundancy to get at the author's intent.

The Cueing System

As we process language for either of the receptive acts, listening or reading, we depend on language to provide multiple cues. The cues may be grammar or its correlate, punctuation, as in the "Used ladies" example. They may also be letter-sound relationships, meaning in its contextual setting, or linguistic redundancy.

The following selection offers further insight into how letter-sound, grammar, meaning, and redundancy cues work: (Autobiography of Malcolm X, 1964)

> "After about a month of 'laying dead,' as inactivity was called, I knew I had to get some kind of hustle going."

The preposition, "after," signals the liklihood of past tense verbs and the appearance of a noun soon thereafter. As the reader processes the noun, "month," the letter-sounds of the word, particularly the first letter, help to bring the meaning to the fore. The fewer cues that readers need to process the material, the more efficiently they perform. The meaning, or semantic cue, "as inactivity was called," helps the reader who is not acquainted with the phrase, "laying dead." No such cue is provided for the term, "hustle." Here the reader must rely on the semantic content of the whole passage or past experience to process it efficiently.

Function words that signal transitional probabilities include articles, auxiliary verbs, prepositions, conjunctions, question markers, clause markers, and negatives. Lewis Carroll's "Jabberwocky,"

> "'Twas brillig, and the slithy toves,
> Did gyre and gimble in the wabe.
> All mimsy were the borogroves,
> And the mome raths outgrabe."

illustrates how the function words of the language give the selection an aura of meaning. Function words also signal the reader that there are probabilities of various grammatical categories to follow. A small adjustment of each content word can refocus the selection so that it has conventional meaning but less impact. For example,

> "'Twas brilliant, and the slithery frogs
> Did jump and gambol in the wave.
> All merry were the burrowing moles,
> And the hamsters outdid themselves."

Linguistic redundancy, or several cues for the same piece of information, can be found in all language samples. Frank Smith (1971, p. 13) describes it as, "information...available from more than one source." It is particularly evident in the following: "At noon, the boys eat their lunches." There are four cues to signal plural: boys, eat, their, lunches. Smith tells us that

the skilled reader makes maximum use of these redundant features of language.

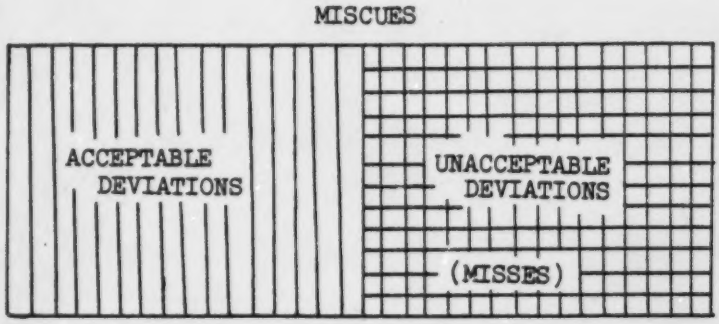
"He got up, took a dip, and split," illustrates several of the reading strategies already discussed (grammar, letter-sound relationships, meaning and redundancy cues) as well as the contribution of past experience to meaning. "Taking a dip" and "splitting" require a communicative competence in a social setting where these terms have meaning.

Any American who attempts to decipher Russian names in a narrative can attest to the fact that overemphasis on one strategy, the use of letter-sound relationships, can interfere with an important purpose of reading, deriving meaning. Inefficient readers labor. Again, efficient readers use minimal cues to extract meaning.

Taking the minimal cue process one step further leads to considering a basic question. How much precision is required of the reader? K. Goodman (1973) tells us that the reader is engaged in what he calls the "psycho-linguistic guessing game." This guessing game is not a wild process, it is a split-second selective process during which the reader makes an hypothesis, samples, and confirms or rejects based on linguistic data furnished by letter-sound relationships, grammar, linguistic redundancy, and meaning.

The HOW of Adapted Miscue Analysis

The teacher who analyzes children's reading is in a position to determine whether or not misreadings are psycholinguistically acceptable or not. Goodman (1973) identifies all oral reading responses that differ from the "expected response" as Miscues. For the purpose of this discussion, the following chart identifies all deviant responses as Miscues, but all totally unacceptable responses as Misses.



For example, if a teacher expected, "He heard the crowd shouting in protest," but observed, "He heard the crowd shouting to protest," that teacher would conclude that the substitute function word was a grammatical deviation, but that it did not substantially interfere with meaning. The reader, indeed, realized the author's intent; it was a Miscue, but not a Miss. If, on the other hand, the following Miscue occurred: expected response, "She brushed Mary's hand;" observed response, "She brushed Mary's head," the teacher would conclude that the reader had furnished a fairly close letter-sound relationship that parallelled the expected grammatical response, but violated the meaning of the sentence. Therefore, the Miscue is classed as a Miss. In another instance, if a teacher expected a response, "The girl jumped rope," and observed the response, "The girl jump rope," s/he would observe a grammatical deviation. It would be classified a Miss if the reader were not a user of dialect, and an acceptable Miscue if the reader were a user of dialect. The reader preserved meaning in his or her linguistic framework.

Clinical use of Miscue Analysis requires that all Miscues be analyzed to diagnose the strategies a reader uses. Classroom reality precludes the use of lengthy or complex procedures. It is imperative that teachers, whose time is limited, have some tools for beginning to diagnose children's reading in terms of, first, reading levels; then, psycholinguistic strategies', and finally, the ability to comprehend.

A simple count of Misses provides a numerical basis for determining reading levels if that is all the time that can be budgeted. The Informal Reading Inventory (for a thorough discussion, see Spache, 1976) is a technique teachers find effective for assigning independent, instructional and frustration levels to books for selected children. A teacher can further diagnose word recognition problems and, on the basis of post-questioning, assess comprehension skills. Length of reading selections depends on the grade level of the child.

The author's Adapted Miscue Analysis allows the user to incorporate the Informal Reading Inventory practice of using 100 word selections for Grade Levels 1 and 2; 150 word selections for Grade Levels 3 and 4; and 200 word selections in succeeding grades. It is proposed that the 98% accuracy requirement for the independent level, 95% for the instructional level, and less than 95% for the frustration level be retained. Keeping the same notational system is also highly desirable, as it may forestall interference from a previously learned system. Corrections, hesitations and repetitions can be noted, but need not be included in the count of Misses for estimating reading levels, as they do not interfere with meaning. If the observer wishes to make a more fine-grained analysis, these corrections, hesitations and omissions may be reviewed.

The teacher prepares the child by giving him/her a typescript of a passage and telling him/her exactly what will take place--a tape recording, teacher notations on a duplicate typescript, and student retelling of the story with necessary prompts, if, indeed, the teacher has decided that all of these elements are feasible. As soon as the level is estimated, the information can be shared with the child. Statements like "These books are very easy for you. You would probably have no trouble reading them by yourself." Or, "These books are a little harder. They're a bit of a

challenge, but I think you could manage them nicely during a reading lesson." Or, "These books seem to be rather difficult. You probably wouldn't want to choose them unless you were very excited about needing to read them."

A comparison of levels computed using Informal Reading Inventory protocols and Adapted Miscue protocols reveals that children score higher reading levels when their reading is assessed according to the Adapted Miscue Analysis system (Quinlan 1977). This presents the possibility that teachers who use IRI level assignments may have been assigning levels that do not present the reader with enough challenge. Indeed, Sipay (1964) found that lowered IRI criterion levels were a more realistic measure as they correlated more closely with the results of silent reading tests. Counting Miscues that do not interfere with processing meaning is a practice that deserves serious evaluation.

If the teacher is able to carry the process one step further, an analysis of the reader's psycholinguistic strategies, entering all Miscues on the following chart will provide objective data. (Adapted from Reading Miscue Inventory Coding Sheet, Y. Goodman and C. Burke, 1972.)

ANALYSIS OF MISSES AND MISCUES

Letter-Sound		Grammar		Meaning		Dialect	
ER*	OR**	ER	OR	ER	OR	ER	OR

* Expected Response
** Observed Response

Analysis of the clusters of Miscues in any of these columns yields quick information for instructional decision making. If all Misses are designated with an asterisk, the observer has additional data for comparing the reader's strategies for all Miscues and for only those which interfere substantially with meaning. For example, when a child furnished an observed

response, "People left their damp, cold tenements to work in factories, shops and business," (Elliott 1973, p. 56-58) the teacher made the entry in the Dialect column, ER, "businesses," OR, "business." Further consideration would lead her/him to conclude that this is not to be classified as Miss; it did not interfere with meaning. If, however, a child read "Word spoon spreed" for "Word soon spread," the appropriate entries in the Letter-Sound, Grammar and Meaning columns would be designated Misses. They do interfere with meaning and furnish diagnostic information. The reader demonstrates fairly close letter-sound associations, overregularizing the double vowel rule and inserting the /p/ phoneme in "soon." S/he possibly thinks word modifies spoon, and disregards meaning in an effort to produce some oral response. If any of these Misses are consistent, specific remedial steps are indicated.

The next step, evaluating comprehension, departs from the practice advocated for IRI, namely, asking questions on various cognitive levels and assigning a percentage grade. Goodman suggests (1972) that the reader retell the story with the aid of probing questions whenever needed. Specified elements of the retelling are evaluated. Adapted procedures call for a retelling with probes and a subjective assessment of the child's comprehension. The artificial nature of highly structured questions may be a stumbling block in determining a reader's true competence. An experience illustrates the point. Having asked a series of questions designed to tap the cognitive levels delineated in Bloom's Taxonomy (Bloom 1956) and receiving blank stares, the author shifted strategies and asked a child to retell the story. In retelling, the child inadvertently included answers to some of the questions that had been asked and furnished some thoughtful insights as the result of probes. As he reacted to a story about Alice Hamilton, the

crusading doctor (Elliott 1973), the child likened Dr. Hamilton's attempt to improve health services in Chicago to the work people had done in setting up a local community health center. The incident highlighted the child's inability to comprehend in a framework the teacher had superimposed, and emphasized his competency when allowed to use strategies appropriate to his own cognitive frame of reference.

Where does this leave the busy classroom practitioner? There are several possibilities depending on class size and time available. The teacher can opt to utilize only oral Misses in order to arrive at a more realistic designation of reading level, so that children experience more success with independent and instructional reading material; or the teacher who has more time may add the retell and probe approaches to arrive at an estimate of comprehension. If still more time is available, the teacher can use a variation of the chart previously suggested to analyze the strategies the reader employs.

Conclusion

Very often, teachers' good intentions are sidetracked by the needs of the moment. Teachers who have adopted the Informal Reading Inventory as part of their procedure are likely to be hardworking professionals. They need to see a compelling reason to change to Miscue Analysis. A brief explanation of the psycholinguistic function of reading and a manageable classroom procedure can promote more widespread adoption of some of the basic tenets of Miscue Analysis. If an inordinate amount of time is needed, the busy practitioner will very likely disregard excellent procedures that have been developed by clinicians and researchers. Adapted Miscue Analysis provides a flexible framework for incorporating some of the psycholinguistic theory underlying Miscue Analysis into a format suitable for classroom use. It preserves notational practices and some of the scoring

elements of the Informal Reading Inventory that are useful for classroom practice, but shifts analysis of responses to a stress on meaning, analysis of the reader's psycholinguistic stragegies, and assessment of comprehension within the reader's own cognitive framework.

Adapted Miscue Analysis allows each teacher to use as much of the procedure s/he decides is appropriate to needs of a busy classroom. In doing so, s/he can reaffirm or modify informal observations with additional systematically collected data.

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